Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics. This journal is © the Owner Societies 2015





Figure SI1. Optimized structures of the 4 entgegen and the 4 zusammen conformers of AO-R obtained by quantum chemical calculations.



Figure SI2. Cyclized conformation of AO-R obtained by quantum chemical calculations.

Table SI1. Relative energy levels in cm<sup>-1</sup> (reference is the ground state of E1) of the ground and excited states of the 8 conformers of AO-R.

E1/E1*	0/19629.4
E2/E2*	543.2/20308.8
E2anti/E2anti*	670.8/21176.6
E1anti/E1anti*	1186.6/21752.8
Z1/Z1*	3048.6/23414.3
Z2/Z2*	4252.4/23772.2
Z4/Z4*	4885.3/24496.2
Z3/Z3*	5714.4/25212.9